MEMORANDUM

TO: Members, Clark Fork Basin Water Management Task Force (Task Force)
FROM: Gerald Mueller
SUBJECT: Summary of the October 6, 2008Task Force Meeting
DATE: October 18, 2008

Participants

The following people participated in the Task Force meeting:

Task Force Members:

Gail Patton	Sanders County Commission
Ted Williams	Flathead Lakers
Arvid "Butch" Hiller	Mountain Water Company
Harvey Hackett	Bitterroot
Fred Lurie	Blackfoot Challenge
Marc Spratt	Flathead Conservation District/Flathead Chamber of Commerce
Caryn Miske	Flathead Basin Commission
Nate Hall	Avista
Steve Hughes	Flathead Irrigation Project Joint Board of Control

Ex Officio Members

Senator Verdell Jackson	Senate District 5

Public

David Shively	University of Montana Department of Geography
Joel Brown	UM Geography graduate student

State and Federal Agency Personnel

Tim Brygmann	Montana Department of Natural Resources and Conservation (DNRC)
Ethan Mace	DNRC Missoula Regional Water Resources Office
George Mathieus	Montana Department of Environmental Quality (DEQ)
Ron Steg	Environmental Protection Agency (EPA)

Staff:

Gerald Mueller	Consensus Associates

Meeting Agenda

- Review of the September 8, 2008 Meeting Summary
- Updates
  - Task Force membership
  - Hungry Horse water activities
  - Senator Jackson's Water Right Forum
  - September 11 & 12, 2008 Water Policy Interim Committee meeting actions
  - FY 2009 Conference Planning
  - Prior Appropriation paper printing
- Value of Water
- Flathead TMDL
- Public Comment

- Next Meeting

Review of the September 8, 2008 Meeting Summary

The dates listed in the Subject line and the page footer should have been September 8, 2008 rather than July 8, 2008.

Updates

Membership - Gerald Mueller reported that on October 3, Mary Sexton sent out letters appointing Brianna Randall and George Culpepper, Jr., to the Task Force. She is considering making the appointment of Bill Gardner of Liberty Drilling to represent well drillers.

Hungry Horse Water Activities - Mr. Mueller reported that the most recent negotiating session between the Confederated Salish and Kootenai Tribes (Tribes) and Montana Reserved Water Rights Commission included a general discussion of the role that Hungry Horse water might play in a compact between the State of Montana and the Tribes. The US Bureau of Reclamation (BOR) is conducting modeling to determine if about 100,000 acre feet of water would be available from Hungry Horse reservoir storage to provide to the Tribes. This modeling is being conducted by Wendy Christianson who is in the BOR Boise office. Results of the modeling were promised for the October 22 negotiating session. Mr. Mueller reminded the negotiating session participants about the second track involving Hungry Horse storage, the State contracting effort with the BOR. At the request of the Task Force, the 2007 legislature allocated $260,000 to pay for a BOR cost allocation study.

Ethan Mace, MT DRNC Hydrologist, stated that he is on the Joint Technical Team, as a State representative, for compact negotiations. He reviewed early BOR modeling outputs pertaining to a Tribal water request from Hungry Horse Reservoir and characterized the prototype as still developing and working through the technical difficulties associated with tracking reservoir releases in such a complex system. The BOR is scheduled to release new modeling results on October 14 and discuss the results in a Joint Technical Team conference call on October 21. The results are also scheduled for presentation at the October 22 negotiating session between the Tribes and the Reserved Water Rights Commission. A contractor for the Tribes, HKM, previously identified Mission Valley acreages that could be irrigated by water pumped from the Flathead River, instead of intercepting mountain tributaries. Accordingly, the 128,000 acre feet release modeled by the BOR equates to the consumed volume for said acreage and is being requested in an effort to increase instream flows for fish in the mountain tributaries. The BOR modeling of Hungry Horse is attempting to determine if an allocation of 128,000 acre feet of water consumption to the Tribes would be consistent with the existing constraints on the operation of the dam and reservoir as they relate to previously established requirements and agreements.

Question - Is the Little Bitterroot included in the potentially irrigable acreage?
Answer by Ethan Mace – As I understand, not presently, but I am not totally certain.

Question - Will seepage and return flows be considered in the BOR modeling?
Answer by Ethan Mace - HKM's model includes canal seepage estimates, but available data is limited. In response to the data gap, a joint State-Tribal study is underway to measure seepage rates in 10 to 15 reaches of the existing canal system. Initial results indicate that the seepage is variable depending on reach and water year variability. Preliminary pilot data from this year show some reaches to gain water and some to lose water.

Question - Will water rights be factored into the analysis?

Answer by Gerald Mueller - The BOR is required by federal law to apply for a state water right for its projects and has filed claims for Hungry Horse. However, once water is stored in the reservoir, water rights are no longer an issue. Hungry Horse storage allocated by contract would not be subject to calls by other water right holders.

Tim Brygmann reported on the contracting effort. No contracts currently exist for Hungry Horse water. Project repayment responsibly is now born only by hydropower. Pursuant to the request from the Task Force, the state is seeking 100,000 acre-feet of water from Hungry Horse to provide for new municipal and industrial consumptive uses in the Clark Fork River basin. The BOR has begun studying how the allocation of project costs would change by adding the 100,000 acre-feet of water municipal and industrial uses. The study is being funded by the $260,000 legislative appropriation. It is being conducted by the Denver office of the BOR.

Question - Would an allocation to the Tribes for irrigation affect this study?
Answer - No. If an allocation occurs via a compact, it would be authorized directly by the Congress and would not go through the BOR contracting process. In addition to increased irrigation, the Tribes are also seeking instream flow to benefit the fishery.

Question - How much water would come from Hungry Horse storage and how much from direct pumping from the Flathead?
Answer - Water released from Hungry Horse could be pumped and stored in Nine Pipes and other storage sites.

Comment - Most new irrigation on the reservation would be in the Camas Division. Camas Division irrigators are upset because although they are charged for a portion of the pumping costs, they have not received their full allocation except once in the last ten years.

Comment - Pumping of ground water and return flows are important sources of water to the Clark Fork River. About 30% of the river's base flow comes from ground water. For example, sewage treatment plant effluent is discharged into Ashley Creek, which in turn flows into the Clark Fork River.

Comment - We need to understand what question(s) the BOR modeling is attempting to answer and what assumptions and data are input into the model. Will you please request that the BOR present its modeling results at the November Task Force meeting?
Answer by Ethan Mace - Yes, I will.

Senator Jackson's Water Right Forum - On September 17, a forum on water rights was held at the Flathead Community College in Kalispell. About 70 people attended, including local government officials and representatives of the Flathead Conservation District. About one-half of those had water right expertise and one-half had no information about water rights. Terry Eckles, the manager of DNRC's Kalispell Regional Water Resources Office, discussed the current and past process for acquiring a water right. He said that the good news is that above Flathead Lake, a water user can now get a new water right permit. 44 applications are moving through DNRC's permit process. Mr. Eckles also discussed the state's Hungry Horse contracting initiative as well as the Tribes' water right claims. Marc Spratt presented a power point on the Flathead Basin hydrology. The forum was well received.

Comment - We should hold a series of seminars on water topics at the Flathead Community College. Two topics that should be considered are the difference(s) between the Steven's Treaty and treaties with different tribes and climate change forecasts of future temperature and

precipitation. Dr. Steve Running has said publicly that he is comfortable with temperature forecasts, but not with precipitation forecasts.

September 11 & 12, 2008 Water Policy Interim Committee Meeting Actions - Gerald Mueller summarized the actions taken by the Water Policy Interim Committee (WPIC) at its last meeting on September 11 and 12. WPIC committee bill, three-quarters of the members had to vote to do so. The following bill drafts were approved as committee bills. The committee member assigned to carry the bill is noted in parentheses. In approving them, WPIC made changes to the language of the bills from the versions posted on its web site. Final versions of the bills are not yet available.

- LC5007, Data study through the Montana Bureau of Mines and Geology (MBMG) (Rep. McNutt) - This bill provides $4.2 million to the MBMG to conduct ground water studies in the seven high growth areas of closed basins.
- LC5009, Discharge permits required (Rep. Cohenour) - The bill requires discharge permits for aquifer recharge to protect water quality.
- LC5012, Water right for aquatic resource activities carried out by MDT (Rep. McChesney) - This bill allows the Montana Department of Transportation to have a water right permit exemption for wetland mitigation required by the federal Clean Water Act.
- LC5016, Creation of water policy interim committee (Sen. Elliott) - This bill creates a permanent interim water policy committee with jurisdiction over water issues. The Environmental Quality Council (EQC) will have two bills, one that would have an EQC subcommittee to address water policy and one similar to LC5016.
- LC5020, Preliminary determinations by DNRC (Rep. Cohenour) - This bill modifies the DNRC water right approval process to allow preliminary determinations by the department and makes other changes to speed the permitting process.
- LC5021, Revises water enforcement laws (Sen. Jent) - This bill allows the Attorney General to become involved in water right enforcement.
- LC5022, Public water and sewer systems for subdivisions (Sen. Elliott) - This bill requires public water and sewer systems for subdivisions with 30 or more lots, and authorizes counties to approve alternatives to public systems.

WPIC did not accept as committee bills, any of the three bills it was considering that would have provided incentives for community water and sewer systems through grant and/or loan programs.

FY 2009 Conference Planning - Dr. David Shively reported that he has reserved facilities on the campus of the University of Montana for the round table and conjunctive management conferences that the Task Force intends to convene in 2009. For the round table, he reserved the University Center Theater and five rooms, each capable of holding 15 people, for Wednesday, May 6, 2009. For the technical conference on conjunctive management of surface and ground water, he reserved the University Center Theater on Monday and Tuesday, June 8-9, 2009. He did not reserve breakout rooms for June 8-9.

Prior Appropriation Paper Printing - Mr. Mueller passed around a draft version of the paper as laid out by Martha Hodder of DNRC. She has not yet created a cover, but it will have a collage of pictures related to water use in the basin. Ms. Hodder will obtain cost estimates for printing the document using four colors. The intent is to have the paper printed in October.

Value of Water

Tim Brygmann, an Economist in the DNRC Water Management Bureau, discussed how economists set a value on water. Because of several factors that make water unique, determining a single value of water is not possible. The factors include: the absence or distortion of a price signal for water

because the price varies with time, place of use, type of use, form of use, and policy framework; water's mobility and high transportation cost; its role as a universal solvent, creating potential quality issues; its interdependence among users, e.g., return flow and the effect of a single ground water use may affect other water users; and its potential for multiple use, i.e., water may be used by a series of users. Because of its high distribution cost, the role of a water supplier is a natural monopoly. Management of water has high transaction costs, which means that agreements are difficult to reach and enforce.

Economists use a variety of frameworks and tools to value water, including welfare economics, opportunity costs, willingness to pay, travel costs, contingent valuation, defensive behavior, and residual returns or hedonic analysis. Welfare economics reflect the fact that water is a necessity for life and is evaluated in terms of the good or service its use provides. Opportunity costs address the cost of using the next increment of water and tradeoffs among potential uses. Willingness to pay addresses what people will pay or accept payment for various water uses. Travel cost is what people will pay to participate in a water use such as recreation at a specific location. Contingent valuation is measured by conducting surveys. Defensive costs relate to what people will pay to avoid an outcome such as a flood. Residual returns or hedonic analysis is determined by looking at the returns for an activity such as farming with and without water or a residential development on or off bodies of water.

Montana does not have a centralized source of information about the cost of water transactions. Transactions that involve public entities may result in price disclosure, e.g., a water lease by the Montana Department of Fish, Wildlife and Parks, but many are between private parties who have no obligation to disclose the transaction price.

Question - Mountain Water is paying $3,500 per acre-foot in southern California. What are the main drivers that establish a price for water?
Answer - Water prices are site specific. Well defined water rights are a prerequisite for pricing water. The market will not cover all valuation challenges.

Comment - HB 831 and mitigation requirements are pushing development of a water market.

Comment - Conservation groups are leasing water to provide instream flow.

Flathead TMDL

George Mathieus, the Chief of the Water Planning Bureau for the Montana Department of Environmental Quality (DEQ), and Ron Steg, Water Projects Manager with the US Environmental Protection Agency (EPA), provided an overview of the Total Maximum Daily Load (TMDL) Project underway in the Flathead Basin. A Total Maximum Daily Load is the total amount of a pollutant that a water body may receive from all sources without exceeding water quality standards. Montana DEQ will package the "TMDL" into a basin-wide plan which also fulfils other Clean Water Act requirements.

The area included in the Flathead project includes the entire Flathead River basin, extending into Canada. Because it is too large to be handled by a single planner, DEQ is using a team approach to address it. Mr. Mathieus is the overall team leader. The team includes Dean Yashan, Jim Bond, Michael Pipp, and Kyle Flynn from DEQ, Mr. Steg from EPA, and multiple consultants. The Project is addressing three pollutants, nutrients, sediment, and temperature. Each pollutant has its own team leader. Of these three, nutrient pollution is the largest issue, and Mr. Steg leads the

nutrient effort. The goal of the nutrient portion of the project is to develop a plan for managing nutrients throughout the basin.

The specific tasks of the nutrient portion of the project include: compiling existing data, preparing technical reports, developing a model, quantifying nitrogen and phosphorus loads, establishing nitrogen and phosphorus goals, establishing a TMDL for Flathead Lake and its tributaries that determines the assimilative capacity for nutrients, evaluating control options, allocating nitrogen and phosphorus reductions to the various sources, writing the plan document, providing public review of the document, responding to public comments, and finally approving the plan. Montana currently has narrative nutrient standards for wadeable water bodies and is developing numeric criteria for them that will specify an amount that cannot be exceeded. The narrative standards state that man-caused discharges cannot cause harm to the water body's beneficial uses.

Question - What will be the model inputs and outputs?
Answer - The model will address the entire watershed. Inputs will include watershed parameters such as precipitation to replicate the system hydrology. Outputs will be checked against actual data. The model will address the nutrients delivered to Flathead Lake itself but will not model in-lake response.

Question - Will the TMDL plan allow dilution to address nutrients?
Answer - Dilution works for streams, but not for the lake because all nutrients end up in the lake.

Question - Will the model address Canada as well?
Answer - Yes. The issues in Canada relate to industrial activities such as oil and gas development and mining. Residential sources may not be an issue there.

Question - Is monitoring happening in Canada?
Answer - We are compiling existing information. Canada is not as accessible to us for monitoring as the US portion of the basin.

Question - Are the Tribes involved?
Answer - We are working directly with the Tribes. The Tribes have narrative nutrient standards, but not numeric standards.

Question - When will the Flathead TMDL be completed?
Answer - We intend to be finished in 2010. We are under a court order to complete all TMDLs by 2012.

Question - How will the TMDL be enforced?
Answer - State and federal law do not provide direct implementation authority for a TMDL. Existing programs, such as point source discharge permits, will address the TMDL load allocations.

Question - Are you working the Flathead Lake Biological Station?
Answer - Yes. The Biological Station is researching Flathead Lake.

Question - Where are you in the process of developing the TMDL?
Answer - We are still early in the process. We are currently compiling existing data and preparing technical reports.

Question - Will limnologic values be recommended?

Answer - They were addressed in a 2001 TMDL.

Question - Are you addressing total phosphorus?
Answer – We will be addressing phosphorus in general, however which form(s) of phosphorus we ultimately use as targets are yet to be determined.

Question - Can the model be used to address "what if" scenarios?
Answer - Yes.

Question - Can a TMDL be used to force development of a sewage treatment plant?
Answer - No.

Question - What is the role of EPA in the Flathead TMDL process?
Answer - EPA is providing a technical role for the nutrient portion of the project.

Question - Headwater streams sometimes contain too little nutrients. Will the TMDL look at headwater streams?
Answer - Yes.

Public Comment
There was no additional public comment.

Next Meeting
The next meeting is scheduled for 9:30 a.m. on Monday, November 3, 2008 at the offices of Mountain Water Company.